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APPLICATION NO. 53492	FILING DATE 07/03/97	FIRST NAMED INVENTOR EDGE	ATTORNEY DOCKET NO.
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LM02/0819

EXAMINER

ART UNIT	PAPER NUMBER
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2772

DATE MAILED:

08/19/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action SummaryApplication No.
08/882,561Applicant(s)
Edge et al.Examiner
Kimbinh NguyenGroup Art Unit
2772☒ Responsive to communication(s) filed on Jun 21, 1999.☐ This action is **FINAL**.☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims☒ Claim(s) 1-5, 7-23, and 25-46 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) 39-46 is/are allowed.☒ Claim(s) 1-5, 7-23, and 25-38 is/are rejected.☐ Claim(s) _____ is/are objected to.☐ Claims _____ are subject to restriction or election requirement.**Application Papers**☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.☐ The drawing(s) filed on _____ is/are objected to by the Examiner.☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.☐ The specification is objected to by the Examiner.☐ The oath or declaration is objected to by the Examiner.**Priority under 35 U.S.C. § 119**☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.☐ received in Application No. (Series Code/Serial Number) _____.☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).**Attachment(s)**☒ Notice of References Cited, PTO-892☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 7☐ Interview Summary, PTO-413☐ Notice of Draftsperson's Patent Drawing Review, PTO-948☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

1. This action is responsive to communications: amendment filed on 6/21/99.
2. Claims 1-5, 7-23 and 25-46 are pending in the application. Claims 1-5 and 7-19 have been amended. Claims 6 and 24 were canceled. Claims 25-46 have been added.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-5, 11, 15-18, 21-23, 26, 28, 30, 32, 34, 36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ring et al. (5,754,184).

With regard to claims 1 and 11, Ring et al. discloses a method for transforming colors between a source and destination color imaging systems, a method comprising: using forward transformation profiles that characterize the source and destination color imaging systems to generate respective sets of device-independent color values for the source and destination color imaging systems; calculating color conversions for different combination of source and destination color image by recursively reducing differences between the respective sets of device-independent color values (col. 2, lines 33-63); and constructing a color maps describing relationships between the different of source and destination color imaging systems using the

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color conversions and user preferences (col. 4, lines 52-65); storing the color maps (col. 5, lines 13-19); determining whether one of the color maps corresponds to the selected combination and the selected user preferences; if so, retrieving the corresponding color map (col. 4, lines 5-21); it is noted that claim 1 differs with the applied reference is “if not, constructing a new color map for the selected combination and user preferences”. However, it would have been obvious to one of ordinary skill in the to include this feature because this is a recursively step in the image processing of computer system.

With regard to claims 3, 15 and 21, Ring et al. discloses using an error function for calculating the color conversions (col. 9, lines 16-28).

With regard to claims 4, 16 and 22, Ring et al. discloses configuring at least one of the profiles to account for certain perceptual effects on color appearance (col. 9, lines 41-63).

With regard to claims 5, 17 and 23, Ring et al. discloses the color map comprises at least one of the following: a lookup table, and an equation (col. 8, lines 33-44).

With regard to claim 18, Ring et al. discloses storing the color map; detecting respective types of color imaging devices between which a color transformation is to be performed; and in response to the detected types, selecting a stored color map (col. 10, lines 13-21).

With regard to claims 26, 28, 30, 32, 34, 36, and 38, Ring et al. discloses the user preferences include illuminant conditions, observer conditions, a selected gamut mapping and a selected device independent color space (col. 5, lines 36-55).

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5. Claims 7, 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ring et al. (5,754,184) in view of Ohta EP 0706285.

With regard to claim 7, Ring et al. discloses transforming colors between source and destination color imaging systems using profiles that characterize the color imaging systems to generate device-independent color values for the source color imaging system, the device-independent color values having a same dimensionality as the source color imaging system (col. 2, lines 34-37); Ohta discloses using the profiles to perform a color conversion for converting the device-independent color values to device-dependent values of the destination color imaging system (col. 13, lines 16-35); and Ring et al. discloses using the color conversion and user preferences to define a color map for transforming colors between the color imaging systems; applying the color map to transform colors in the event the color map was defined based on existing user preferences (col. 2, lines 38-61); in the event the color map was not defined, using the color conversion to redefine the color map and applying the redefined color map to transform colors (col. 9, lines 20-40). It would have been obvious to one of ordinary skill in the art to combine the transforming colors and the intermediate color space viewing to allow for reproduction of the color data based on user preferences as taught by Ring et al. and Ohta.

With regard to claim 8, Ring et al. discloses the color conversion is performed at least twice (col. 2, lines 50-61).

With regard to claim 14, the rationale provided in the rejections of claims 1 and 7 is applicable thereto.

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6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ring et al. (5,754,184) in view of Ohta EP 0706285 and further in view of ICC Profile Format Specification (11/96).

With regard to claim 9, ICC Profile Format discloses using the color conversion to evaluate its accuracy at least once (page 74, Annex A); and revising the color conversion at least once to improve its accuracy (page 78, Annex B, section B.2).

7. Claims 10, 12, 13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ring et al. (5,754,184) in view of Ohta EP 0706285, and further in view of Guay (5,903,275).

With regard to claim 10, the rationale provided in the rejections of claim 7 is applicable thereto. Further, Guay discloses using the color conversion to improve the accuracy of the color conversion relative to a quality threshold, using the color conversion to define a color map for transforming colors between the color imaging systems (col. 5, lines 21-33). It would have been obvious to one of ordinary skill in the art to include the concept that Guay supports for color conversions, associated with a screen preview to display a representation of the page description with accurate colors to satisfy the quality threshold.

With regard to claim 12, Guay discloses for use in transforming colors between first and second color imaging systems respectively using first and second color coordinate systems, a color mapping method comprising: generating first device-independent color coordinates as a function of color coordinates in the first color coordinate system (col. 2, lines 65-67); estimating preliminary color coordinates in the second color coordinate system generating second device-

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independent color coordinates as a function of the preliminary color coordinates; adjusting the preliminary color coordinates to reduce an error between the first and second device independent color coordinates (col. 3, lines 1-15); returning to step (a) until the error satisfies a quality threshold (col. 5, lines 21-33); and constructing a color map describing a relationship between the first and second color imaging systems as a function of the adjusted color coordinates (col. 6, lines 20-35); steps f, g, h the rejection is applied the same as claim 7.

With regard to claim 13, Guay discloses using the color coordinates in the first color coordinate system to estimate the preliminary color coordinates (col. 3, lines 1-15).

With regard to claim 19, the rationale provided in the rejections of claims 1 and 11 is applicable thereto. Further, Ring et al. discloses a data storage medium storing a computer executable program (col. 5, lines 3-19).

8. Claims 2, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ring et al. (5,754,184) in view of Stone et al. ("Color Gamut Mapping and the Printing of Digital Color Images").

With regard to claims 2, 20 and 21, Stone discloses recursively reducing differences between black channel information (page 261, sections 3.3.1, 3.3.2). It would have been obvious to one ordinary skill in the art to apply the reducing black point of the image to agree with the black point of the destination device.

9. Claims 25, 27, 29, 31, 35 and rejected under 35 U.S.C. 103(a) as being unpatentable over Madden et al. (5,7786,823).

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With regard to claims 25, 27, 29, 31, 33, 35, and 37, Madden et al. discloses the user preferences include illuminant and observer conditions (col. 3, lines 49-65). It would have been obvious to one of ordinary skill in the art to include this feature because Madden et al. provides the color signals based on illuminance level and human observer as taught by Madden et al.

10. Claims 39-46 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art does not disclose generating device links based on the color conversions, each of the device links defining a transformation of color values for one of the combinations of source and destination color imaging devices.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

11. With respect to applicant's argument, Ring et al. and applied references show the construction of color map using the color conversions and user preferences.

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12. Any response to this action should be mailed to

Commissioner of Patents and Trademarks Office

Washington, D.C. 20231

Or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 305-9724 (for informal or draft communications, please label

“PROPOSED” or “DRAFT”

Hand- delivered responses should be brought to Crystal Park II, 2021 Crystal Drive,
Arlington. VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner
should be directed to Kimbinh Nguyen whose telephone number is (703) 305-9683. The examiner
can normally be reached on Monday through Friday From 7:30 a.m. to 5:00p.m. (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor,
Mark Powell, can be reach on (703)305-9703. However, in such a case, please allow at least one
business day before contacting Mark Powell.

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the group receptionist whose telephone number is (703)305-3900.

Kimbinh Nguyen

Serial Number: 08/882561

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August 13, 1999

A handwritten signature in black ink, appearing to read 'Mark R. Powell', with a long horizontal flourish extending to the right.

MARK R. POWELL
SUPERVISORY PATENT EXAMINER
GROUP 2700